

(12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

(19) World Intellectual Property Organization International Bureau



(43) International Publication Date
30 June 2005 (30.06.2005)

PCT

(10) International Publication Number
WO 2005/059139 A2

(51) International Patent Classification⁷: C12N 15/52

Saarbrücken (DE). WITTMANN, Christoph [DE/DE]; Am Kalkofen 13, 66127 Saarbrücken (DE).

(21) International Application Number:
PCT/IB2004/004429

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(22) International Filing Date:
17 December 2004 (17.12.2004)

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IS, IT, LT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

(25) Filing Language: English
(26) Publication Language: English
(30) Priority Data:
PCT/IB2003/006456
18 December 2003 (18.12.2003) IB

Published:

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2005/059139 A2

(54) Title: METHODS FOR THE PREPARATION OF A FINE CHEMICAL BY FERMENTATION

(57) Abstract: The present invention features methods of increasing the production of a fine chemical, e.g., lysine from a microorganism, e.g., *Corynebacterium* by way of deregulating an enzyme encoding gene, i.e., fructose-1,6-bisphosphatase. In a preferred embodiment, the invention provides methods of increasing the production of lysine in *Corynebacterium glutamicum* by way of increasing the expression of fructose-1,6-bisphosphatase activity. The invention also provides a novel process for the production of lysine by way of regulating carbon flux towards oxaloacetate (OAA). In a preferred embodiment, the invention provides methods for the production of lysine by way of utilizing fructose or sucrose as a carbon source.